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(54) Title: ANALYSIS OF DIFFERENTIAL GENE EXPRESSION

(57) Abstract: The invention provides methods for detecting the differential expression or presence of two analytes, and more specifically to procedures which provide for rapid and efficient analysis of gene expression in biological systems. In particular, the invention provides a method of detecting and analysing differences between nucleic acids from two sources, which method comprises: a. providing nucleic acids from two sources as labelled probes; b. forming a mixture of the labelled probes with pooled reagents wherein each reagent is a population of beads carrying a polynucleotide target, the target of one reagent being different from the target of another reagent, the beads of one reagent being distinguishable from the beads of another reagent; c. incubating the mixture under conditions to promote specific hybridisation between probes and targets; and, d. analysing beads in the mixture by flow cytometry.